

REMARKS

Claim 15 has been amended. Claims 1-26 remain pending in this application. Applicant acknowledges that the Examiner has allowed claims 1-7 and 21-26.

The Examiner rejected claims 8-20 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,701,204 (*Nicholson*) and further in view of U.S. Patent Application No. 2003/0083754 (*Tripathi*). Applicant respectfully traverses this rejection.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. That is, there must be something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986). In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997). The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. Third, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. Federal Circuit has emphasized that, in an

obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 143 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35.

In the instant case, the Examiner has not met even a single criteria necessary to establish a *prima facie* case of obviousness. As an initial matter, the Examiner fails to point to any suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Rather, the Examiner uses the language of the claims as a template to argue that the teachings of the references are combinable. As noted, the mere fact that the prior art can be combined or modified does not make the resultant combination obvious. The Examiner has also failed to cite to a reasonable expectation of success. In fact, the combination of *Tripathi* and *Nicholson* suggests anything but a reasonable expectation of success. For instance, the section of the text from *Nicholson* (col. 2, line 64 through col. 3, lines 13) that is relied upon by the Examiner describes transmitting and processing of "test data." *Nicholson* describes that "test data" refers to data from electrical tests performed on the wafers after "all the processing steps have been completed." See col. 2, lines 64-67. In contrast, *Tripathi* describes (at paragraph 57) a fault detection feedback system that is associated with process runs (as the wafers are processed). The two references thus teach away from the claimed combination proposed by the Examiner because in the case of *Nicholson*, the defects are based on electrical tests performed after all the processing is complete, and in the case of *Tripathi*, the defects refer to abnormalities during a

process run. Thus, the teachings of these two references run contrary to the manner in which the Examiner suggests to combine them. These references are completely devoid of any requisite suggestion or motivation to combine in the manner suggested by the Examiner. Moreover, the Examiner's conclusory declaration that the two references can be combined is at odds with the teachings of the two references. Accordingly, the Examiner's combination of these references is improper.

Thus, in view of the above reasons, independent claim 8 and claim 15 are allowable. Moreover, claims depending from these independent claims are allowable for at least the same reason.

Claim 15 and its dependent claims are allowable for an additional reason in that the cited references, when considered alone or in combination, do not teach all of the claim limitations, as explained below.

As described in the patent application, one or more embodiments of the present invention are directed at efficiently identifying a possible cause of a fault in a manufacturing system. For example, claim 15 is directed to an article comprising one or more machine-readable storage media containing instructions that when executed enable a processor to: receive an error signal provided by a fault detection unit, wherein the error signal is indicative of a fault associated with processing of a wafer in a processing tool; access information related to the fault from a central database, wherein the database includes information associating one or more error faults with the

processing tool; and perform diagnostics on the processing tool based on the accessed information.

Independent claim 15 is allowable for a similar reason claim 1 has been allowed by the Examiner, as explained next. None of the applied references, when considered alone or in combination, teach at least accessing a database, wherein the database includes information associating one or more error faults with the processing tool. The Examiner appears to suggest that the database in *Nicholson* discussed at col. 3, lines 11-12 corresponds to the database of claim 1. The database in *Nicholson*, however, includes pre-defined failure signatures (see col. 3, lines 11-12), and does not include information associating one or more faults (or, alternatively, error conditions) with the processing tool. As explained in *Nicholson*, based on the pre-defined failure signatures and the captured failure signatures, additional diagnosis may be performed (col. 3, lines 13-16) to find common tools associated with the defective wafers. Thus, the database in *Nicholson* does not include information associating one or more faults with the processing tool. For at least these reasons, claim 15 and its dependent claims are also allowable. The secondary reference *Tripathi* fails to cure the deficiency in *Nicholson*.

Reconsideration of the present application is respectfully requested.

In light of the arguments presented above, Applicants respectfully assert that the rejected claims are allowable. As such, a Notice of Allowance is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Houston, Texas telephone

number (713) 934-4064 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

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